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REMARKS

Claim 30, 49, 50, 55, 57, 63, 64, and 65 have been amended. Claims 30, 32-37, 46-53, and 55-65 are pending in the application.

Claim 30 has been amended to incorporate subject matter of previously presented claim 49.

Claim 49 has been amended to include an epoxy resin in the plastic pallet composition, an embodiment included in pending claim 52. Also incorporated in the claim is subject matter relating to antimicrobial additive, friction material, and RFID tag that is present in currently pending claims 35, 48, and 46.

Claim 50 has been amended to clarify its meaning. A basis for the amendment is provided, for example, on page 3, lines 19-21, and on page 10, lines 26-29.

Claim 55 and 57 have been amended to clarify their meanings.

Claim 63 has been amended to incorporate subject matter that is present in currently pending claims 56 and 57 and in the application, for example, on page 10, line 1.

Claim 64 has been amended to clarify its meaning by defining the thermosetting resin as epoxy resin, by including the parts by weight of polyolefin and epoxy resins in the composition, by defining the plastic pallet as a molded pallet, and by stating the friction material is in-mold applied. Antecedent bases for these amendments are to be found in the specification, for example, on page 7, line 23, page 3, lines 17-24, page 14, line 29, page 15, line 3, and page 15, lines 24 to 29.

Claim 65 has been amended to clarify its language.

Examination and reconsideration of the application, as amended, is requested.

REPEATED REJECTIONS***Claim Rejections – 35 USC 103***

Paragraph 2. Applicants' Responses to the repeated rejections under 35 USC 103 of claims 30, 32-37, 46-53 and 55-61 that are presented in Amdt. F and Amdt. G are hereby incorporated by reference into this Response.

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Claim 30 has now been amended to incorporate subject matter from pending claim 49. Preferred polyolefin resins are now more clearly described along with the amounts of polyolefin resin(s) and thermosetting resin(s).

The polyolefin resins disclosed in Oishi et al. in col. 29, lines 13-14, and alleged to be disclosed in col. 29, lines 3-6 (the Second Invention Group invention), are not described with particularity. No disclosure about the appropriate amount of polymerization, functionalization, or crosslinking is provided. The amounts of resins of different types alleged to be useful are not disclosed. Applicants find no disclosure about combinations of polyolefin and thermosetting resins or amounts of such resins in Second Invention Group of Oishi et al. or in any of the 125 working examples in Oishi et al. Utilities for the Second Invention Group are disclosed in col. 48, lines 25-35, and include various uses, such as paints, floorings, concretes, air brakes, soles, and artificial leathers. However, neither transportation equipment, such as automobiles, nor containers, are disclosed as Second Invention Group utilities. As held in *In re Gould*, 231 U.S.P.Q. (B.P.A.I. 1986), a reference itself must provide an enabling disclosure to be used as a proper reference. The reference must be sufficient to put the public in possession of the invention. Further, it is well-accepted in Patent Law that silence in a reference is not equivalent to a teaching. In *In re Burt*, 53 C.C.P.A. 929, 935 (1966), the Court said:

“Silence in a reference is hardly a proper substitute for an adequate disclosure of facts from which a conclusion of obviousness may justifiably follow.”

Nowhere does Oishi et al. disclose details of the polyolefins (e.g., amount of polymerization and presence or absence of crosslinking) and amounts of the polyolefin and thermoset resins they use. Hence, Oishi et al. lacks enablement for a blend of polyolefins and thermosetting resins. Additionally, Applicants also submit that even, if for the sake of argument, the Oishi et al. reference could be construed to teach a combination of polyolefin and thermosetting resins, it would not adequately support such embodiments with an enabling disclosure.

Neither Oishi et al., nor Endo et al., taken together or separately provide any direction or guidance about the types and amount of polyolefin resins and thermosetting resins that would result in a useful plastic pallet. No working examples are provided that suggest a plastic pallet with a composition of the present invention. Neither Oishi et al. nor Endo et al. contain enabling disclosure or even a working example of composites with the types and amounts of polyolefin and

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thermoset resins useful in the present invention. In accordance with the Court's decision in *In re Borkowski and Van Venrooy*, 169 U.S.P.Q. 642 (C.C.P.A. 1970) a reference fails if undue experimentation is required to practice the reference invention. Oishi et al. fails as a reference against the instant invention because of its lack of enablement (or even suggestion) on how to select materials and prepare a composite useful in the instant invention would, at the very least, require undue experimentation, and the Endo et al. reference does not cure this deficiency. Hence, it is submitted that this rejection should be withdrawn.

Paragraph 3. Applicants' Responses to the repeated rejection under 35 USC 103 of claim 62 (Amdt. F and Amdt. G) are hereby incorporated by reference into this Response.

NEW REJECTIONS

Claim Rejections – 35 USC 103

Paragraph 4.

Claim 63: Claim 63 has been rejected under 35 USC 103(a) as being unpatentable over Oishi et al. in view of Endo et al.

Oishi et al., as Applicant has pointed out previously, relates to three separate and distinct inventions referred to in the reference as "First Invention Group" (see col. 2, line 47 to col. 17, line 46), "Second Invention Group" (col. 17, line 47 to col. 56, line 47), and "Third Invention Group" (see col. 56, line 48 to col. 69, line 35). Each of the three Invention Groups has its own compositions and utilities. The Office Action alleges that "Oishi et al. teach a plastic article (i.e., a part or component of transportation equipment or a container, col. 69, lines 1-3) comprising a composition comprising a blend of a polyolefin resin and a thermosetting resin (col. 29, lines 3-6 and 13-14) . . .".

Applicant objects to this statement because it mischaracterizes the reference. It is very clear that the utility alleged by the Examiner is a combination of Third Invention Group utilities, and it is clear that Third Invention Group utilities are made using only thermosetting resins (see col. 56, lines 52-53). Alleging that a Third Invention Group utility can be made with compositions reserved

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for Second Invention Group utilities is improper because it ignores the clear categorizations Oishi et al. provide within their disclosure.

As to the alleged utility being “a part or component of transportation equipment or a container”, Applicants again object to this linking of utilities. Oishi et al. says “transportation equipment such as automobiles”. Oishi et al. does not treat the transportation equipments and containers as equivalent. Instead, they are in different “fields” (see first word in col. 69). Applicant previously discussed this argument in the Preliminary Amendment and Response to Rejections filed September 2, 2005, beginning at page 9, line 6, Amdt. G. The Office Action further alleges that Oishi et al. teach a plastic article “comprising a composition comprising a blend of a polyolefin resin and a thermosetting resin (col. 29, lines 3-6 and 13-14)”. Again, this is a mischaracterization of Oishi et al. Applicants addressed col. 29 of Oishi et al. in detail in Amdt. F and Amdt. G which documents are incorporated herein by reference.

The Office Action states on page 2 and 3 (bridging sentence) that the polyolefin resin is a fully prepolymerized, uncrosslinked, hydrocarbon polyolefin. To the contrary, the nature of the polyolefin is not described in Oishi et al. It is not known if it is fully or partially prepolymerized, or if it is crosslinked or uncrosslinked. Again, silence in a reference is not a teaching. (see *In re Burt*, supra.)

The Office Action acknowledges that the Oishi et al. reference fails to teach a plastic pallet and the claimed relative amounts by weight of polyolefin and thermosetting resins. Applicants agree. Applicants incorporate by reference their remarks made above about the lack of an enabling disclosure in the Oishi et al. reference regarding blends of resins, amounts of polymerization and crosslinking, and amounts of resins in the compositions of the Second Invention Group.

Endo et al. relates to a multipart composition comprising reclaimed PET and polylactone resins (both of which are thermoplastics) useful as a plastic pallet that can contain a flame retardant. Endo et al. does not teach or suggest a plastic pallet composition that is a combination of polyolefin and thermosetting resins, or the desirability of using flame retardants that are halogen-free.

Applicants disagree with the statement in the Office Action (page 3, penultimate paragraph) that “Oishi et al. teach that the polyolefin resin and the thermosetting resin are blended”. Applicants find no such teaching, and have already argued this position in prior Responses (see Amdt. F and Amdt. G) that are incorporated herein by reference. Claims 30, 49, 63, and 64 (and

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the dependent claims) of the application are further distinguished from Oishi et al. by description of further details about the polyolefin resins (for example, amounts of polymerization and crosslinking) and the amounts of different resins to be used in the invention. No enabling disclosure for preparing composites for a plastic pallet is present in Oishi et al., and, at the very least, it would require undue experimentation to determine useful resins and quantities. Hence, the Examiner's conclusion is based on hindsight and is improper.

Applicants submit that neither Oishi et al. nor Endo individually or combined teach or suggest the combination of resins taught in the present invention, or the amounts of resins needed to produce a useful plastic pallet, hence, the rejection of claim 63 should be withdrawn.

Paragraph 5.

Claims 64 and 65: Claims 64 and 65 have been rejected under 35 USC 103(a) as being unpatentable over Oishi et al. in view of Endo et al. and further in view of Juhanson.

Claims 64 and 65 relate to plastic pallets that are molded articles comprising in-mold applied friction material.

Claim 64 has been amended to further incorporate descriptions about types of polyolefins, to designate the thermosetting resin as epoxy resin, and describe the amounts of different resins to be used in the composition for a plastic pallet. Also, subject matter relating to in-mold application of friction material has been incorporated into the claim.

Applicants comments about Oishi et al. and Endo et al., discussed immediately above are incorporated herein by reference.

Juhanson relates to a polyethylene non-skid case for carrying packaged soft drinks and the like. The Abstract of Juhanson states that the bottom of the case for carrying packaged soft drinks contains depressions in the lower surface of the bottom panel. The depressions are configured to entrap a portion of a high friction pad that is inserted therein to retain the pad. In Figs. 4 and 5, pad 60 is clearly shown as the high friction pad that is inserted in depressions in the lower surface of the bottom panel. Col. 5, lines 22-26, states that the pads may be compressed from the side by an appropriate tool for quick insertion into the depression or slot 62. Clearly, after formation of the slot, the pad is inserted therein so the pad is not in-mold applied.

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In contrast, claims 64 and 65 claim a pallet in which friction material is in-mold applied on at least one surface of a molded member. In-mold applied is defined in the instant application on page 5, lines 28-29, and is further discussed in the application, for example, on page 16, lines 20-22. It requires that the friction material be placed in a mold, and that during the molding process, the friction material becomes laminated to the molded resin without added adhesive. This unique construction is not taught or suggested by Juhanson where a friction pad is inserted into slots in the lower surface of the case after the case has been formed (molded).

It is submitted that the subject matter of claims 64 and 65, because of their unique composition and construction, are not taught or suggested by the cited references (i.e., Oishi et al., Endo et al., and further in view of Juhanson) and so the rejection of these claims should be withdrawn.

Paragraph 6. Applicants' arguments relating to linking "transportation equipments", "containers", and Second Invention Group compositions has been discussed in Amdt. G, beginning on page 9, and that discussion and the entire Response is hereby incorporated herein by reference.

Again, Applicants object to the failure to use the complete phrase "transportation equipments such as automobiles" rather than the term "transportation equipments". Clearly, "transportation equipments such as automobiles" relates to wheeled, motorized, people movers and is not akin to a bucket (container). The Examiner's linking of the concept of transportation equipments such as that contemplated by Oishi et al., and unrelated Oishi et al. utilities is based on hindsight and is improper.

Applicants' arguments relating to Oishi et al. compositions of Second Invention Group (i.e., blends within the group thermoplastics and blends within the group thermosets) have been discussed in detail in Amdt. F as well as Amdt. G, which discussions have been incorporated herein by reference.

As to rubber-modified resins, the Office Action says Applicant's arguments are moot. Applicants disagree because Oishi et al. does not disclose blends of thermoplastic and thermosetting resins. The reference is completely silence as to any blend of resins taught by Applicants and the amounts of resins useful in such blends. As to rubbers, Applicants have

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submitted references with their prior Response (Amdt. G) showing that rubbers may be either thermosetting or thermoplastic. Oishi et al. does not tell us what category rubbers it intends. Again, there is a lack of enabling disclosure (types, amounts) in Oishi et al. as to these materials. It is well-accepted in the patent arts that **silence in a reference is not a teaching**. (See discussion of *In re Burt*, supra.)

As already explained by Applicants, the Oishi et al. disclosure at col. 29, lines 1-6, even including the disclosure at lines 13-14, does not explicitly, plainly or clearly show a blend of thermoplastic and thermoset resins as Applicants describe in their prior Responses (see e.g. Amdt. F and Amdt. G) (which have been incorporated herein by reference). Instead Oishi et al. discloses the use either of thermoplastic resins or blends of thermosetting resins, it does not explicitly or plainly show a blend of both thermoplastic and thermosetting resins. Col. 29, lines 13-14 are examples of thermoplastic resins but there is no disclosure of blends of such materials with thermosetting resins.

As to semi-interpenetrating polymer networks, Applicants again urge the Examiner to study the diagrams and short description of blends and interpenetrating polymer networks referenced in two prior Responses (L. H. Sperling reference, "Introduction to Physical Polymer Science", John Wiley & Sons). Blends and interpenetrating polymer networks are different materials and are best understood by studying the diagrams provided by the Sperling reference. It is important to note the interpenetrating networks have cross-over points - a true network. Blends are like two strands of spaghetti that are mixed or intermingled, and there are no cross-over points. This is discussed in Amdt. F and Amdt. G, previously incorporated herein by reference.

As to the term "structural", Applicants are entitled to be their own lexicographer. Applicants use of the term "structural" is well-accepted in the polymer and pallet arts and they are entitled to point out which of several definitions given by a dictionary refers to their art. It is not clear why the Examiner does not allow Applicants the right to point out which of several dictionary definitions is used in their art.

As for the phrase "flame-retardant polyolefin/thermoset blend useful as a transportation container" (Office Action page 8, bottom paragraph), Applicants find two problems. Applicants do not accept that Oishi et al. teaches polyolefin/thermoset blends and have set forth detailed

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arguments in Amdt. F and Amdt. G on this subject. The second problem is with the phrase "transporation container". This is (1) not a phrase set forth in Oishi et al (Oishi et al. discloses "transportation equipments such as automobiles", i.e., wheeled, motorized people movers as one field of utility versus "containers", i.e., buckets, as another field of utility); and (2) these utilities are separate Third Invention Group utilities and the Office Action is combining them and pairing them with what is alleged to be Second Invention Group compositions. Clearly, this is improper and is discussed in detail in Amdt. F and Amdt. G.

As for a pallet being a piece of "transporation equipment", it is important to note again that the Oishi et al. does not state this. Rather, Oishi et al. disclosed "parts and components of transporation equipments such as automobiles" which puts a very different spin on the term. As noted herein, "parts and components of transportation equipments such as automobiles" clearly points towards parts and components of wheeled, motorized, people movers and points away from pallets which are non-wheeled, non-motorized, non-people movers.

Applicants, who are skilled in the art of polymer chemistry and pallet construction, again maintain that Oishi et al. means blends of more than one thermoplastic resin or blends of more than one thermosetting resin. This statement has been characterized by the Examiner as "speculation", however, no support for this characterization is given.

It is submitted that all rejections have been overcome.

Applicant herein incorporates by reference pertinent case law that is set forth on pages 19-20 of Amdt. F.

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application, as amended, are requested. Allowance of claims 30, 32-37, 46-53, and 55 to 65 at an early date is solicited.

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If there are remaining non-allowed claims in this application, the Examiner is respectfully requested to write out all remaining rejections and the references relied upon, rather than referring back to prior Office Actions, so that the file will be in better condition for appeal.

Respectfully submitted,

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